

CLAIMS

1. A method for achieving increased directivity in listening situations where at least one microphone is embedded in a first structure and at least one microphone is
5 embedded in a second structure, the first and the second structure being freely movable relative to each other, the method comprising conveying a microphone signal from one structure to a common processing unit for the microphone signals in the other structure and successively processing the signals for achieving a directional output based on the microphone input in both structures.
- 10 2. A method according to claim 1, where the signal to be transmitted from one structure to another structure is delayed.
- 15 3. A method according to claim 1 or 2, where the microphone signal of the one structure is amplified, attenuated, low-pass filtered and/or phase shifted to optimise the directivity.
4. A method according to claim 1,2 or 3, where in addition the distance and/or the
20 spatial position of the one microphone is determined and conveyed to the processing unit.
5. A microphone array for achieving increased directivity in listening situations, where the array comprises at least two microphones for producing a corresponding
25 number of microphone signals, where one microphone is embedded in a first structure and a second microphone is embedded in a second structure, the first and the second structure being movable relative to each other to increase or decrease the distance between the microphones in the first structure and the second structure, where means are provided for conveying the signals from at least one microphone to a common processing unit for the microphone signals.
- 30 6. A microphone array according to claim 5, where the distance between a microphone in the first structure and a microphone in the second structure may be brought to a mutual distance facilitating directivity processing below 1000Hz.

7. A microphone array according to claim 5, where in addition means for determining the distance and/or the spatial position of the one microphone relative to the other.
- 5 8. A microphone array according to claim 7 where, in addition, there are means for conveying the position to the processing unit.
9. A microphone array according to any of the claims 5-8, where means are provided for conveying a microphone array signal to a head-worn device, e.g. a hearing aid,
10 where these means for conveying may comprise a Radio Frequency (RF), inductive, Infra-Red (IR), wired or other transmission link.
10. A hearing system comprising a hearing aid and a separate microphone unit, where
15 the microphone unit has at least one microphone unit and a transmitting capability enabling transmission of at least one microphone signal to the hearing aid, which on its side comprises a receiving capability for receiving the transmitted signal, a signal processing unit for processing the received microphone signal together with a microphone signal obtained by a microphone in the hearing aid and eventually preparing a processed directional signal for output through an output transducer in
20 the hearing aid.
11. A hearing system according to claim 10, where the transmitting capability may comprises wireless a RF, inductive or IR transmission link or a wired link.
- 25 12. A hearing aid for use in a system as defined in claim 10, where means are provided for receiving an additional external microphone input and for conveying these to a processing unit in the hearing aid, where the processing unit is adapted to provide a directional output based on the microphone inputs.
- 30 13. A hearing aid according to claim 12, comprising a wireless receiver for receiving microphone input signals from an independent microphone unit.

14. A microphone unit for use in a system as defined in claim 10, the unit comprising at least one microphone and a transmitter for transmitting a microphone signal to a hearing aid comprising a receiver.
- 5 15. A microphone unit according to claim 14, comprising a wireless transmitter for transmitting microphone input signals to an independent hearing aid unit.